

Asa Fitch and His Contributions to Microlepidoptera

Richard Brown, Sangmi Lee, and
Jeffrey Barnes

Asa Fitch and the Emergence of American Entomology

With an Entomological Bibliography and
a Catalog of Taxonomic Names and Type Specimens

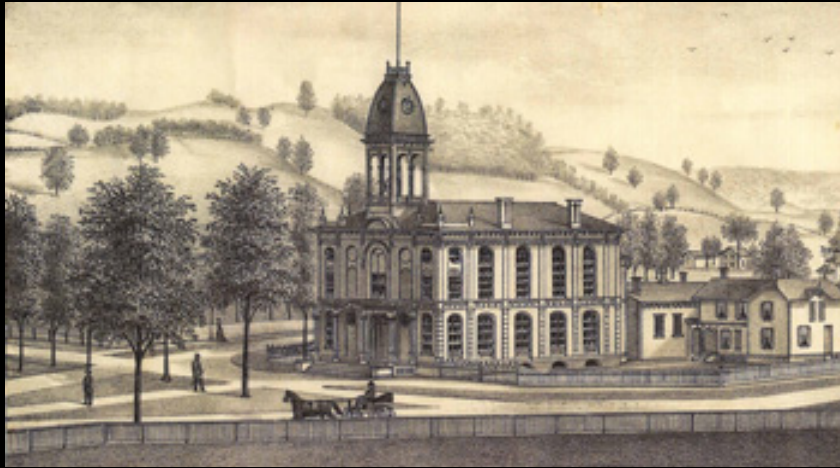


by Jeffrey K. Barnes



The University of the State of New York
The State Education Department
Albany, New York 12230

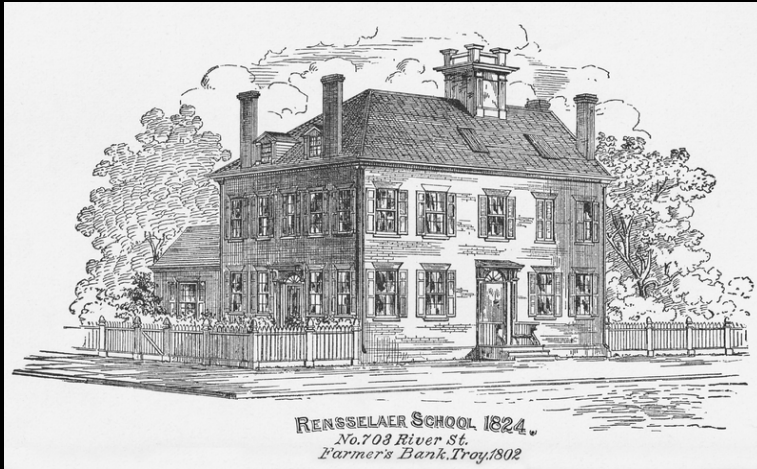
Early Years in Salem, NY



"Oh! Whilst the Holy Spirit is visiting many, would he might not pass by me!"

"Should I ever be a drunkard? The thought scared me. I thank God for bringing me to reflect upon my danger."

Education at Rensselaer School



"At dinner, in cutting up some boiled cabbage, I found a spider in it almost equal to any I ever saw in size, & so perfect that I could had I been disposed traced out its specific name...."



Rensselaer Polytechnic Institute

Medical Training - Vermont Academy of Medicine and Rutgers Medical School (NYC)



"I have danced. I have played. I have kissed rosy cheeks. I have won maiden's smiles. Yet I do not think I have gone astray.....or sinned deeply against my God"

The Family Farm and the “Bug House”



“Let me render homage to Linnaeus! He was the first who made the study of Nature as alluring, as fascinating to the mind, as its objects are to the eye...”

Creation of Entomology as a Profession by New York Legislature and New York Agricultural Society

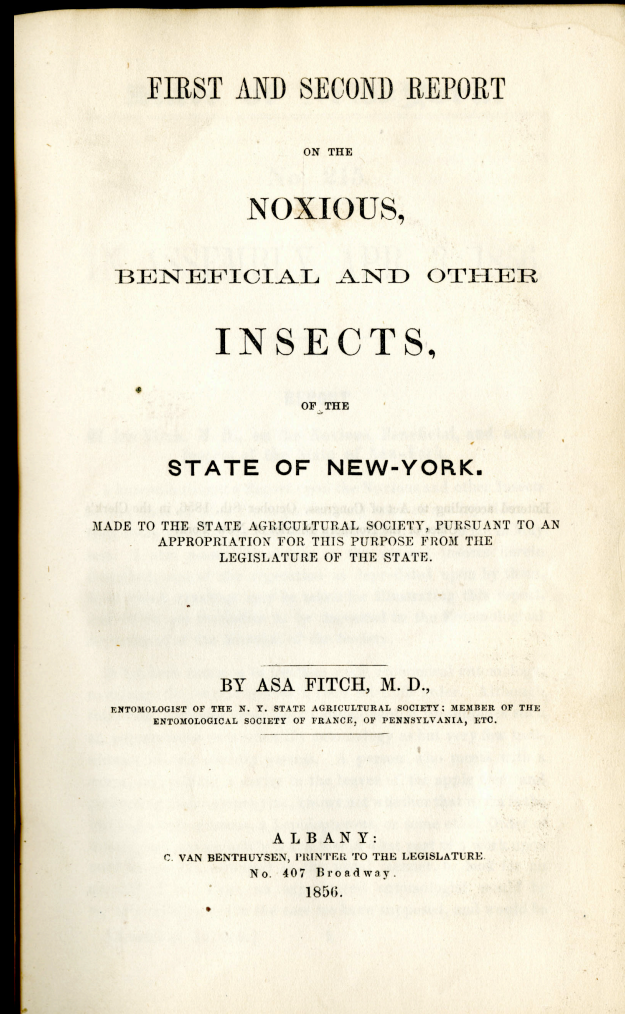


Employed as the State Entomologist
in 1854 for \$1,000 annually.

*"....and that America is the land of insects -
that we are here sustaining greater losses
from this class of objects than are
experienced in corresponding parts of
the old world - and that we shall be
obliged to study their habits..."*

Noxious, Beneficial and other Insects of the State of New York

Published as separate reports
and in *Transactions of the New
York State Agricultural
Society*



Macrolepidoptera described by Asa Fitch

Nola triquetrana

Balsa malana

Apamea amputatrix

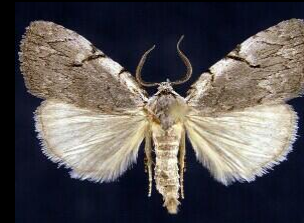
Schinia volupta

Clostera albosigma

Tolype laricis

Euchlaena johnsonaria

Speranza ribearia

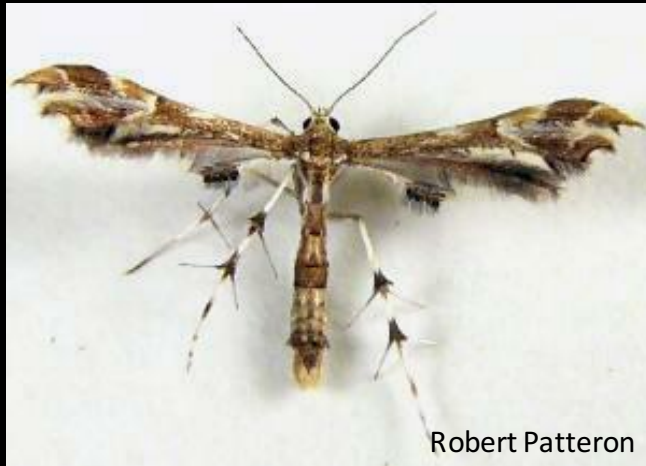


All photos by Jim Vargo

Microlepidoptera Described by Fitch

- 28 species in 10 families
- 17 species currently valid names
- 11 junior synonyms, mostly of names proposed Linnaeus, Hubner, Haworth, and other European workers. Two by Clemens.

Pterophoridae



Geina periscelidactyla



Dejongia lobidactylus



Geina tenuidactyla

Oidaematophorus cretidactylus

Tortricidae



Robert Patterson

Archips cerasivorana



Patterson - USNM

Clepsis persicana



Cydia caryana



Tom Murray

Argyrotaenia quercifoliana

Oecophoridae, Yponomeutidae, Incurvariidae



Eido trimaculella



Atteva aurea



Paraclemsia acerifoliella

Gracillariidae



D. Davis

Macrosaccus uhlerlla



Harrison – Microleps.org

Chrysaster ostensackenella



Harrison – Microleps.org

Maccrosaccus morrisella



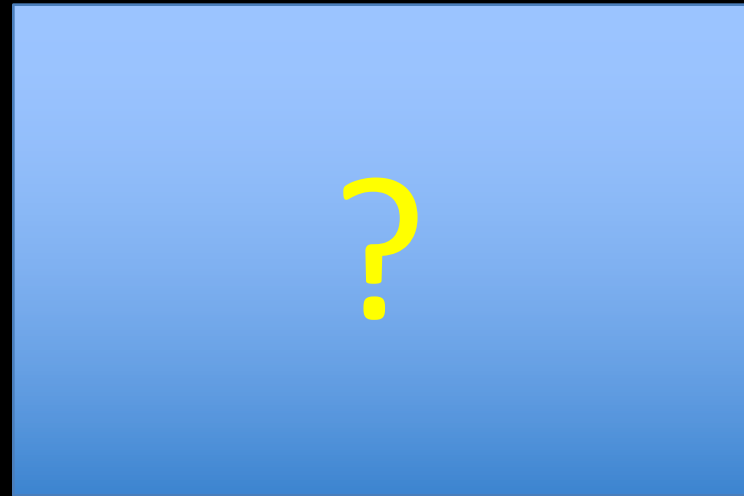
Richard Wolfert

Phyllonorycter quercialbella

Gelechiidae



Dichomeris ventrella



Anacampsis robiniella

Fitch's 1859 Description of *Anacampsis robiniella*

- *“white blister-like spots on the under side of the leaves...” “..the cavity in the leaf assumes the shape of an oven, its floor flat and its roof arched or concave.”*
- *“The larva....is very much flattened....and divided into thirteen segments by deep transverse constrictions.”*
- *“a minute moth 0.45 [inch] wide across its spread wings, which are blackish brown on their outer half, tawny yellow on their inner side,”*

Macrosaccus robiniella (Clemens) (Gracillariidae)
(= *Argyromiges pseudacaciella* Fitch)



© Terry Harrison Microleps.org

"The larva occurs in the blister-like spots of locust leaves at the same time as the preceding, but is at once distinguished from it by its more slender form...., and not at all flattened."
"...a minute moth only 0.24 in width..." (Fitch, 1959)

Chrysaster ostensackenella (Fitch) (Gracillariidae)



© Terry Harrison Microleps.org

"Another moth...sometimes enters opened window in the evening, alighting around the lighted lamps upon our tables,....Its width when the wings are spread is but 0.20." (Fitch, 1859)

Sinoe robiniella (Fitch) (Gelechiidae)

Anacamptis robiniella Fitch, 1859

Sinoe fuscopalidella Chambers, 1873

Gelechia robiniaefoliella Chambers, 1880



Gelechia robiniaefoliella Chambers



Described from one specimen of a series reared by Comstock as a "leaf spinner" on *Robinia*. Neotype designation.

Sinoe fuscopalidella Chambers

Lectotype Designation (MCZ)



Type
1533

Kentucky.
Chambers.

Lectotype
Sinoe fuscopalidella
Cham. Desig. by
Sangmi Lee, 2012

Sinoe fuscopalidella Chambers

Lectotype Designation (MCZ)



Kentucky.
Chambers.

Lectotype
Sinoe fuscopalidella
Cham. Desig. by
Sangmi Lee, 2012

Neotype
Anacampsis robiniella
Fitch Desig. By
Sangmi Lee, 2012

Anacampsis robiniella Fitch

Neotype Designation

Asa Fitch - the Compleat Entomologist



Named 451 taxa, about ½ currently valid

Described taxa from 107 families in 12 orders of insects and two classes of other arthropods

Proposed generic names for 13 taxa, seven valid.

Asa Fitch - the Later Years



Pneumonia in 1859; infirmities
in the next decade.

Position of State Entomologist
terminated in 1872; replaced by Lintner

1879 – died at age of 70 years.

Acknowledgements

Thanks to Don Davis and Jurate De Prins for information on Gracillariidae feeding on *Robinia*. Terry Harrison for use of photographs on .microleps.com. Richart Wolfert, Robert Patterson, Robin McLeod, Jim Vargo, Tom Murray, and Don Davis for photographs on Moth Photographers Group website. Joe MacGown for photographs of specimens in Mississippi Entomological Museum, and Rick Hoebeke (Cornell University Insect Collection) and Phil Perkins (Museum Comparative Zoology) for loan of specimens. Credits for historical photographs of Asa Fitch are provided in the book “Asa Fitch and the Emergence of American Entomology.”